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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,208	02/03/2006	Saul R. Dooley	GB030131	9674

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EXAMINER

HA, DAC V

ART UNIT	PAPER NUMBER
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2611

NOTIFICATION DATE	DELIVERY MODE
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11/28/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary	Application No. 10/567,208	Applicant(s) DOOLEY ET AL.	
	Examiner Dac V. Ha	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show any description to elements of drawing as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

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2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. According to USPTO current guidance, a process (steps of the method claims in the present application) must be tied to another statutory class (such as a particular apparatus) to meet the requirement for a patent eligible process under § 101.

Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 11 claims “a computer program”, which does not fall in one of the statutory categories (process, machine, manufacture and composition of matter) under 35 USC § 101 (MPEP 2106.IV.B).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claim 4** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation “wherein the signal stream is sampled at a higher bit level than at least one of the first or second bit levels; and wherein the samples are processed at on

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of either the first or second bit levels” is not clear or vague. It is not understood exactly which sample is processed at which bit level.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1, 2, 5, 8** are rejected under 35 U.S.C. 102(e) as being anticipated by Hellmark (US 6,504,863).

Re claim 1, Hellmark discloses “processing a sampled signal stream containing at least one spread spectrum signal comprising the steps of processing samples at a first bit level and, either in parallel or subsequently, processing samples at a second bit level, different from the first bit level” in Fig. 6A, element 620; col. 6, line 49; col. 7, lines 6-10, 23-25.

Re claim 2, Hellmark further discloses “a change from processing the samples at the first bit level to the second bit level occurs upon experiencing difficulty acquiring a spread spectrum signal” in col. 7, lines 23-25, 36-39.

Re claim 5, Hellmark further discloses wherein the signal stream is sampled at a varying bit level of either first or second bit levels corresponding to the bit level at which those samples will be processed” in col. 7, lines 6-10, 36-39.

Re claim 8, Hellmark further teach “a receiver” in col. 6, lines 60-61.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hellmark in view of Zhodzishsky et al. (hereafter Zhodzishsky) (US 6,219,376).

Re claim 4, Hellmark discloses almost all claimed subject matter in claim 4, as stated above. Hellmark further discloses “wherein the signal stream is sample at a higher bit level that at least one of the first or second bit levels” in Fig. 6A, element 620; col. 6, line 49; col. 7, lines 6-10, 23-25 by the fact that Hellmark uses a variable resolution analog to digital converter (ADC).

Hellmark differs from the claimed invention in that it does not teach “the samples are processed at one of either the first or second bit levels by selectively ignoring bits of the signal samples”.

Zhodzishsky, in the same filed of endeavor, discloses “the samples are processed at one of either the first or second bit levels by selectively ignoring bits of the signal samples” in col. 14, lines 19-24; col. 21, lines 50-56.

Since both Hellmark and Zhodzishsky relate to utilization of multi-levels ADC, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the teaching of “ignoring bits” for different resolution, taught by Zhodzishsky, into Hallmark, and a predictable result still can be expected.

9. **Claims 6-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Abraham et al. (US 2005/0080561) (hereafter Abraham) in view of Hellmark.

Re claim 6, Abraham discloses “the samples are processed in parallel” “for the purpose of acquiring respective spread spectrum signals” as follows.

Abraham discloses parallel processing channels (para. 0039; Fig. 3, elements 306_N, para. 0045) for “acquiring respective spread spectrum signals”, wherein each element 306 acquires respective signal. Further, Abraham discloses in each of the parallel processing channels, adaptive sampling resolution is used (para. 0048; 0051).

Abraham differs from the claimed invention in that Abraham does not disclose “processing samples at a first bit level and, either in parallel or subsequently, processing samples at a second bit level, different from the first bit level” and samples are processed in parallel “at first and second bit levels”.

Hellmak discloses “processing samples at a first bit level and, either in parallel or subsequently, processing samples at a second bit level, different from the first bit level” in Fig. 6A, element 620; col. 6, line 49; col. 7, lines 6-10, 23-25.

Therefore, it would have been obvious to a person of ordinary skill in the art the time of the invention to incorporate the teaching of processing samples at different bit levels, taught by Hellmark, into Abraham, so that the signal acquisition in each processing channels can be adaptively adjusted not only with sampling resolution but also with bit resolution. Note, by incorporating Hellmark into Abraham, signal processed in each parallel channels would operate at different bit levels (“samples are process in parallel at first and second bit levels”) depending on requirement in each channels (Abraham; para. 0048). As a result, the system would have been more robust and power consumption would have been more efficient.

Re claim 7, Abraham discloses “samples are processed in parallel” “for the purpose of acquiring the same spread spectrum signal” (para. 0039; Fig. 3, elements 306_N, para. 0045); wherein each parallel element 306 acquires the same signal originated from element 302. Additionally, Abraham teaches that in each of the parallel processing channels, adaptive sampling resolution is used (para. 0048; 0051).

Abraham differs from the claimed invention in that Abraham does not disclose “processing samples at a first bit level and, either in parallel or subsequently, processing samples at a second bit level, different from the first bit level” and samples are processed in parallel at “first and second bit levels”.

Hellmak discloses "processing samples at a first bit level and, either in parallel or subsequently, processing samples at a second bit level, different from the first bit level" in Fig. 6A, element 620; col. 6, line 49; col. 7, lines 6-10, 23-25.

Therefore, it would have been obvious to a person of ordinary skill in the art the time of the invention to incorporate the teaching of processing samples at different bit levels, taught by Hellmark, into Abraham, so that the signal acquisition in each processing channels can be adaptively adjusted not only with sampling resolution but also with bit resolution. Note, by incorporating Hellmark into Abraham, signal processed in each parallel channels would operate at different bit levels ("samples are process in parallel at first and second bit levels") depending on requirement in each channels (Abraham; para. 0048). As a result, the system would have been more robust and power consumption would have been more efficient.

10. **Claims 9-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellmark in view of Abraham.

Re claims 9-11, see claim 1 above. Further, software implementation would have been alternatives as disclosed by Abraham in para. 0036, 0043. Therefore, it would have been obvious to one skilled in the art at the time of the invention to implement the adaptive bit resolution of Hellmark in software, as taught by Abraham, as alternatives, and predictable result still can be expected.

Allowable Subject Matter

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11. **Claim 3** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cox et al. (US 6,693,953)

Underbrink et al. (US 6,532,370)

Bahai (US 6,980,148)

McNeely (US 7,292,638)

Hirsch (US 6,442,193)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 571-272-3040. The examiner can normally be reached on 4/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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/Dac V. Ha/
Primary Examiner, Art Unit 2611